

Ferrero's alkaline solid (hydroxide) is an essence of their invention, enabling slow removal of the remaining CO<sub>2</sub>. The instant invention is not concerned with the CO<sub>2</sub>, but rather with removing scorch-forming radicals formed under the high temperature during the foaming stage; the instant epoxy groups – far from being inert – react rapidly with said radicals which would otherwise cause the undesired scorching effects, including discoloration, embrittlement and possibly even spontaneous combustion. Once the high temperature and foaming are over, the scorch damages cannot occur, and the anti-scorch composition has finished its role. On the other hand, Ferrero's inert liquid (epoxibisphenol) and the hydroxide work on, at least for one month (lines 36-38 at col. 3), and any reaction the carrier undergoes must be slow (lines 39-40 at col. 3). It is clear that Ferrero and Barry relate to entirely different technical problems and there would be no motivation to combine them:

Ferrero's concern is a high thermal conductivity of CO<sub>2</sub>, which fills the foam voids and lowers the insulation capability of the PU foam (lines 36-43 at col. 1 in Ferrero); whereas Barry's concern is PU degradation resulting from oxidation (lines 30-31 at col. 3 in Barry).

The applicant wishes to stress the fact that none of the above two documents addresses the same problem as the instant invention: undesirable discoloration occurring during the manufacturing process and shortly after, especially in the center of the PU blocks where the temperature remains high for longer time periods (lines 1-6 of the instant Background of the Invention). The instant invention addresses a problem occurring during the manufacturing process, whereas Barry addresses mainly the problem of a slow oxidation and Ferrero the problem of insulation. It is believed that a person skilled in the art would have expected that Barry and Ferrero provide the solution for scorching, and would not have been motivated to combine the techniques.

Claims 8-11 are rejected as being unpatentable over Barry et al. (US 5,338,478) in view of Ferrero-Heredia et al. (US 5,530,035) as evidenced by Horacek (US 5,106,883). The Applicant respectfully traverses the Examiner's rejection.

Claim 1 is now believed to be novel and non-obvious, and therefore dependent claims 8-11 are also believed to be novel and non-obvious. Although Horacek relates to some chemicals employed in the instant technique, the three publications do not disclose or even hint at the instant composition, even if combining them, and if selecting from them the constituents of the instant composition. Each of the three cited documents has a different technical goal, each addressing a different problem:

- (a) degradation from slow oxidation (Barry, line 30 at col. 3),
- (b) high thermal conductivity (Ferrero, line 39 at col. 1), and
- (c) melamine sediments (Horacek, lines 16-19 at col. 1), whereas the instant invention addresses still another problem, namely:
- (d) discoloration in the center of the PU foam blocks during their production.

Without a hindsight, it would be difficult to construct the instant technique by selecting elements from three different techniques of which not even one addresses exactly the same goal; a person skilled in the art would not expect to find a solution of the problem (d) by mixing solutions to problems (a), (b), and (c).

Claims 14-20, 25, and 26 are rejected as being unpatentable over Barry et al. (US 5,338,478) in view of Ferrero-Heredia et al. (US 5,530,035). Claims 21-24 are rejected as being unpatentable over Barry et al. in view of Ferrero-Heredia et al. as evidenced by Horacek. The Applicant respectfully traverses the Examiner's rejection.

It is clear that Barry addresses the problem of (slow) oxidative degradation (lines 30-31 at col. 3, lines 52-61 at col.1), whereas the stabilizer composition (diarylamine, hindered phenol, and pentaerythritol diphosphite) "*further serves to prevent or reduce discoloration and scorching*" (lines 60-61 at col. 1). Barry relates to scorching only incidentally, the main goal being preventing the oxidative degradation. Even if ascribing to Barry technological goals similar to the instant invention, still it would need a hindsight to pick and choose from Barry, Ferrero and Horacek the features to get the instant invention in its whole. As discussed in paragraph 2 above the considered techniques address the following problems:

- (a) degradation from slow oxidation (Barry, line 30 at col. 3), and eventually scorching ((line 61 at col. 1),
- (b) high thermal conductivity (Ferrero, line 39 at col. 1), and
- (c) melamine sediments (Horacek, lines 16-19 at col. 1), and eventually high viscosity (line 31 at col. 1), whereas the instant invention addresses the problem of
- (d) discoloration in the center of the PU foam blocks during their production, and eventually embrittlement and even spontaneous combustion (lines 11-20 on page 1).

The solution offered by the considered documents are quite incongruent and hardly combinable, comprising the inclusion of the following chemicals in the compositions:

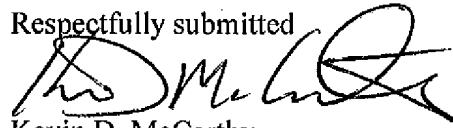
- (a) diarylamine, hindered phenol, pentaerythritol diphosphite,
- (b) sodium hydroxide in an inert carrier such as polyepoxide,
- (c) melamine, cyanuric and ammeline derivatives (triazine based compounds).

A person skilled in art would, in her/his decision making, have had to i) disregard the different goals of Barry and Ferrera, ii) generalize Barry's materials as antioxidants and phosphites, iii) pick Ferrero's polyepoxide and generalize it as available epoxy, and iv) exclude Ferrero's hydroxide, while ignoring Horacek. However improbable the above described decision-making process is, it stills disregards the least probable step – namely selecting Ferrero as an information source for this goal, because there are hundreds prior art publications as near to Barry's technique as Ferrero et al.

Conclusion

It is believed that in view of the above explanations, the amended claims define a novel and non obvious invention. Therefore, favorable reconsideration and allowance of the claims are earnestly solicited.

Respectfully submitted

A handwritten signature in black ink, appearing to read 'Kevin D. McCarthy', written over the typed name.

Kevin D. McCarthy

Reg. No. 35,278

Roach, Brown, McCarthy & Gruber, P.C.  
1920 Liberty Building - 424 Main Street  
Buffalo, New York 14202